

**REMARKS**

Applicants acknowledge receipt of the Final Office Action mailed December 27, 2010.

In the Final Office Action, the Examiner rejected claims 31-34, 38-45, 49, 51, 54-65, 68, 70, and 71 under 35 U.S.C. § 103(a) as being unpatentable over *Pneumatiques* (GB 1,091,507) in view of *Okamoto* (U.S. Patent No. 5,287,691); rejected claims 31-37, 39-48, 51, and 54-65, 70, and 71 under 35 U.S.C. § 103(a) as being unpatentable over *Pneumatiques* in view of *Mizuma* (JP Patent No. 11-241282); and rejected claims 31 and 69 under 35 U.S.C. § 103(a) as being unpatentable over *Io* (JP Patent No. 06-024216) in view of *Okamoto*.

In this Amendment, Applicants propose to amend claims 31, 41, 69, and 70, and add new claim 72. Upon entry of this Amendment, claims 31-49, 51, 54-65, and 68-72 will be pending. Of these claims, claims 31, 69, and 70 are independent.

The originally-filed specification, claims, abstract, and drawings fully support the amendments to claims 31, 41, 69, and 70, and the addition of new claim 72. No new matter has been introduced.

Based on the foregoing amendments, Applicants traverse the rejections above and respectfully request reconsideration for at least the reasons that follow.

**I. 35 U.S.C. § 103(a) REJECTIONS**

Applicants traverse the rejection of claims 31-34, 38-45, 49, 51, 54-65, 68, 70, and 71 under 35 U.S.C. § 103(a) as being unpatentable over *Pneumatiques* in view of *Okamoto*. Applicants respectfully disagree with the Examiner's arguments and

conclusions and submit that amended independent claims 31 and 70 patentably distinguish over *Pneumatiques* and *Okamoto* at least for the reasons described below.

The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. See M.P.E.P. § 2142, 8th Ed., Rev. 7 (July 2008). Such an analysis should be made explicit and cannot be premised upon mere conclusory statements. See *id.* “A conclusion of obviousness requires that the reference(s) relied upon be enabling in that it put the public in possession of the claimed invention.” M.P.E.P. § 2145. Furthermore, “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art” at the time the invention was made. M.P.E.P. § 2143.01(III), internal citation omitted. Moreover, “[i]n determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious.” M.P.E.P. § 2141.02(I), internal citations omitted (emphasis in original).

“[T]he framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). . . . The factual inquiries . . . [include determining the scope and content of the prior art and] . . . [a]scertaining the differences between the claimed invention and the prior art.” M.P.E.P. § 2141(II). “Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art.” M.P.E.P. § 2141(III).

Amended independent claim 31 recites a high or very high performance pneumatic tyre, comprising: “at least one flipper; . . . wherein the at least one flipper is in contact with an associated annular reinforcing element and at least partially envelops the associated annular reinforcing element and bead filler, . . . and wherein a ratio of a height of a transverse section of the tyre to a chord of the transverse section of the tyre is between 0.25 and 0.45.”

Amended independent claim 70 recites a high or very high performance pneumatic tyre, comprising: “a chafer; . . . wherein the chafer is disposed between two carcass plies, and wherein a ratio of a height of a transverse section of the tyre to a chord of the transverse section of the tyre is between 0.25 and 0.45.”

*Pneumatiques* discloses that “[t]he present invention is especially suitable for giant tyres such as truck tyres.” (*Pneumatiques*, p. 1, ll. 40-41). *Pneumatiques* further appears to disclose a pneumatic tire including a bead with a single inextensible reinforcing bead wire 10 surmounted by a rubber filler 11, the assembly being partially enclosed by a flipper 12 constituted by parallel cords, cables or wires, preferably metal wires, embedded in a calendered layer of rubber mixture. (*Id.* at p. 2, ll. 35-41). In the bead region, the carcass plies are divided into two equal or unequal groups, one of which, group 13, extends down the axially inner side of the filler 11 and is turned up outwardly about the wire 10 and back on itself along the axially outer side of the flipper 12. The other group of plies, group 14, extends radially inwardly in contact with stepped edges of the plies 13 and extends to the toe 15 of the bead. Located on the outside of the external group 14 of carcass plies are two flat stiffening strips 16. (*Id.* at p. 2, ll. 47-64).

As admitted by the Examiner, “*Pneumatiques* fails to expressly suggest a cord having at least one preformed element.” (*Final Office Action*, p. 2, para. 2, ll. 14-15). *Pneumatiques* also fails to teach or suggest at least a high or very high performance pneumatic tyre, “wherein a ratio of a height of a transverse section of the tyre to a chord of the transverse section of the tyre is between 0.25 and 0.45,” as recited in amended independent claim 31 (emphases added). Further, *Pneumatiques* also fails to teach or suggest at least a high or very high performance pneumatic tyre, comprising: “a chafer; . . . wherein the chafer is disposed between two carcass plies, and wherein a ratio of a height of a transverse section of the tyre to a chord of the transverse section of the tyre is between 0.25 and 0.45,” as recited in amended independent claim 70 (emphases added).

As discussed above, *Pneumatiques* discloses that “[t]he present invention is especially suitable for giant tyres such as truck tyres.” (*Pneumatiques*, p. 1, ll. 40-41). Accordingly, *Pneumatiques* fails to teach or suggest the claimed high or very high performance pneumatic tire having a height/cord ratio of between 0.25 and 0.45.

In order to cure the deficiencies of *Pneumatiques*, the Examiner relies on *Okamoto* and alleges “a metallic cord is recognized as providing improved corrosion resistance and fatigue resistance, as shown for example by *Okamoto* . . . *Okamoto* broadly teaches the use of such a metallic cord in tire constructions.” (*Final Office Action*, p. 2, para. 2, ll. 15-18).

*Okamoto*, for example, appears to disclose a metal cord formed by twisting two spirally pre-shaped metal filaments together with a twisting pitch P. The metal filament has not only the spiral shape formed by twisting, but retains so much of its spiral

preshape as to have a pitch  $p$  equal to 0.20-0.50 times the twisting pitch and a diametric height  $h$  of 0.05-0.25 mm. (*Okamoto*, Abstract). Such teaching, even if present in *Okamoto*, which Applicants do not necessarily concede, however, does not constitute or suggest at least a high or very high performance pneumatic tyre, “wherein a ratio of a height of a transverse section of the tyre to a chord of the transverse section of the tyre is between 0.25 and 0.45,” as recited in amended independent claims 31 and 70 (emphases added).

As explained above, the elements of amended independent claims 31 and 70 are neither taught nor suggested by the cited references. Consequently, the Final Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the claim. Accordingly, no reason has been clearly articulated as to why the claim would have been obvious to one of ordinary skill in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established for independent claims 31 and 70. Claims 31 and 70, and claims 32-34, 38-45, 49, 51, 54-65, 68, and 71 which depend from claim 31, are patentable over *Pneumatiques* and *Okamoto*. Applicants therefore request that the rejection of claims 31-34, 38-45, 49, 51, 54-65, 68, 70, and 71 under 35 U.S.C. § 103(a) be withdrawn.

Applicants traverse the rejection of claims 31-37, 39-48, 51, and 54-65, 70, and 71 under 35 U.S.C. § 103(a) as being unpatentable over *Pneumatiques* in view of *Mizuma*. Applicants respectfully disagree with the Examiner’s arguments and

conclusions and submit that amended independent claims 31 and 70 patentably distinguish over *Pneumatiques* and *Mizuma* at least for the reasons described below.

Amended independent claim 31 recites a high or very high performance pneumatic tyre, comprising: “at least one flipper; . . . wherein the at least one flipper is in contact with an associated annular reinforcing element and at least partially envelops the associated annular reinforcing element and bead filler, . . . and wherein a ratio of a height of a transverse section of the tyre to a chord of the transverse section of the tyre is between 0.25 and 0.45.”

Amended independent claim 70 recites a high or very high performance pneumatic tyre, comprising: “a chafer; . . . wherein the chafer is disposed between two carcass plies, and wherein a ratio of a height of a transverse section of the tyre to a chord of the transverse section of the tyre is between 0.25 and 0.45.”

*Pneumatiques* discloses that “[t]he present invention is especially suitable for giant tyres such as truck tyres.” (*Pneumatiques*, p. 1, ll. 40-41). *Pneumatiques* further appears to disclose a pneumatic tire including a bead with a single inextensible reinforcing bead wire 10 surmounted by a rubber filler 11, the assembly being partially enclosed by a flipper 12 constituted by parallel cords, cables or wires, preferably metal wires, embedded in a calendered layer of rubber mixture. (*Id.* at p. 2, ll. 35-41). In the bead region, the carcass plies are divided into two equal or unequal groups, one of which, group 13, extends down the axially inner side of the filler 11 and is turned up outwardly about the wire 10 and back on itself along the axially outer side of the flipper 12. The other group of plies, group 14, extends radially inwardly in contact with stepped edges of the plies 13 and extends to the toe 15 of the bead. Located on the

outside of the external group 14 of carcass plies are two flat stiffening strips 16. (*Id.* at p. 2, ll. 47-64).

As admitted by the Examiner, “*Pneumatiques* fails to expressly suggest a cord having at least one preformed element.” (*Final Office Action*, p. 5, para. 3, ll. 10-11). *Pneumatiques* also fails to teach or suggest at least a high or very high performance pneumatic tyre, “wherein a ratio of a height of a transverse section of the tyre to a chord of the transverse section of the tyre is between 0.25 and 0.45,” as recited in amended independent claim 31 (emphases added). Further, *Pneumatiques* also fails to teach or suggest at least a high or very high performance pneumatic tyre, comprising: “a chafer; . . . wherein the chafer is disposed between two carcass plies, and wherein a ratio of a height of a transverse section of the tyre to a chord of the transverse section of the tyre is between 0.25 and 0.45,” as recited in amended independent claim 70 (emphases added).

As discussed above, *Pneumatiques* discloses that “[t]he present invention is especially suitable for giant tyres such as truck tyres.” (*Pneumatiques*, p. 1, ll. 40-41). Accordingly, *Pneumatiques* fails to teach or suggest the claimed high or very high performance pneumatic tire having a height/cord ratio of between 0.25 and 0.45.

In order to cure the deficiencies of *Pneumatiques*, the Examiner relies on *Mizuma* and alleges “a metallic cord is recognized as providing high durability, as shown for example by *Mizuma* . . . *Mizuma* broadly teaches the use of such a metallic cord in tire constructions.” (*Final Office Action*, p. 5, para. 3, ll. 11-13).

*Mizuma*, for example, discloses a steel cord including a single wire or twisted wires, which preferably comprise flat high tension steel wires having a carbon content of

0.07-1.00 wt.%. At least one of the wires does not have a straight line portion on a flat surface and only includes smooth, continuous curved portions, and is shaped in a two-dimensional wave form having a wave pitch of 2-10 mm and a wave height of 0.02-10 mm. The steel cords are embedded in a rubber molded product in the form of belt plies or carcass plies in steel radial tires. (*Mizuma*, Abstract). Such teaching, even if present in *Mizuma*, which Applicants do not necessarily concede, however, does not constitute or suggest at least a high or very high performance pneumatic tyre, "wherein a ratio of a height of a transverse section of the tyre to a chord of the transverse section of the tyre is between 0.25 and 0.45," as recited in amended independent claims 31 and 70 (emphases added).

As explained above, the elements of independent claims 31 and 70 are neither taught nor suggested by the cited references. Consequently, the Final Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the claim. Accordingly, no reason has been clearly articulated as to why the claim would have been obvious to one of ordinary skill in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established for independent claims 31 and 70. Claims 31 and 70, and claims 32-37, 39-48, 51, and 54-65, and 71 which depend from claim 31, are patentable over *Pneumatiques* in view of *Mizuma*. Applicants therefore request that the rejection of claims 31-37, 39-48, 51, and 54-65, 70, and 71 under 35 U.S.C. § 103(a) be withdrawn.

Applicants traverse the rejection of claims 31 and 69 under 35 U.S.C. § 103(a) as being unpatentable over *Io* in view of *Okamoto*. Applicants respectfully disagree with

the Examiner's arguments and conclusions and submit that independent claims 31 and 69 patentably distinguish over *Io* and *Okamoto* at least for the reasons described below.

Amended independent claim 31 recites a high or very high performance pneumatic tyre, comprising: "at least one flipper; . . . wherein the at least one flipper is in contact with an associated annular reinforcing element and at least partially envelops the associated annular reinforcing element and bead filler, . . . and wherein a ratio of a height of a transverse section of the tyre to a chord of the transverse section of the tyre is between 0.25 and 0.45."

Amended independent claim 69 recites a high or very high performance pneumatic tyre, comprising: "a chafer; . . . wherein the chafer is disposed axially internal with respect to the at least one carcass ply, and wherein a ratio of a height of a transverse section of the tyre to a chord of the transverse section of the tyre is between 0.25 and 0.45."

*Io* appears to disclose a heavy duty radial tire with enhanced bead durability and without enlargement of the bead apex rubber thickness. The value  $J1/I1+J1$  ranges from 45-50%, wherein  $I1$  represents the bead apex rubber thickness at the winding end of a steel ply and  $J1$  represents the dimension from the edge of the steel ply to the curving surface on the outside of the side wall. (*Io*, Abstract).

As admitted by the Examiner, "*Io* fails to expressly suggest a cord having at least one preformed element." (*Final Office Action*, p. 8, para. 4, ll. 6-7). *Io* also fails to teach or suggest at least a high or very high performance pneumatic tyre, comprising: "at least one flipper; . . . wherein the at least one flipper is in contact with an associated annular reinforcing element and at least partially envelops the associated annular

reinforcing element and bead filler, . . . and wherein a ratio of a height of a transverse section of the tyre to a chord of the transverse section of the tyre is between 0.25 and 0.45,” as recited in amended independent claim 31 (emphases added). Further, *lo* fails to teach or suggest a high or very high performance pneumatic tyre, comprising: “a chafer; . . . wherein the chafer is disposed axially internal with respect to the at least one carcass ply, and wherein a ratio of a height of a transverse section of the tyre to a chord of the transverse section of the tyre is between 0.25 and 0.45,” as recited in amended independent claim 69 (emphases added).

The Examiner asserts that “*lo* is directed to a pneumatic tire construction comprising a chafer 3 and a flipper that is spaced from a carcass structure by said chafer.” (*Final Office Action*, p. 8, ll. 2-4). The alleged “flipper” that is spaced from the carcass structure 1, however, is not in contact with the associated annular reinforcing element. Rather, a portion of the alleged “flipper” appears to be in contact with the strip 3 identified by the Examiner as the alleged “chafer”, and another portion of the alleged “flipper” appears to be in contact with the alleged carcass structure 1. Accordingly, the alleged “flipper” of *lo* that is spaced from the carcass structure 1 cannot be considered to be analogous to the claimed “flipper.” Consequently, *lo* fails to teach or suggest a high or very high performance pneumatic tyre, comprising: “at least one flipper; . . . and a chafer; wherein the at least one flipper is in contact with an associated annular reinforcing element and at least partially envelops the associated annular reinforcing element and bead filler,” as recited in amended independent claim 31 (emphases added).

Further, *Io* fails to teach or suggest at least a high or very high performance pneumatic tyre, “wherein a ratio of a height of a transverse section of the tyre to a chord of the transverse section of the tyre is between 0.25 and 0.45,” as recited in amended independent claims 31 and 69 (emphases added).

In order to cure the deficiencies of *Io*, the Examiner relies on *Okamoto* and alleges “a metallic cord is recognized as providing improved corrosion resistance and fatigue resistance . . . *Okamoto* broadly teaches the use of such a metallic cord in tire constructions.” (*Final Office Action*, p. 8, para. 4, ll. 7-10).

As discussed above, *Okamoto*, for example, appears to disclose a metal cord formed by twisting two spirally pre-shaped metal filaments together with a twisting pitch *P*. The metal filament has not only the spiral shape formed by twisting, but retains so much of its spiral preshape as to have a pitch *p* equal to 0.20-0.50 times the twisting pitch and a diametric height *h* of 0.05-0.25 mm. (*Okamoto*, Abstract). Such teaching, even if present in *Okamoto*, which Applicants do not necessarily concede, however, does not constitute or suggest at least a high or very high performance pneumatic tyre, comprising: “at least one flipper; . . . wherein the at least one flipper is in contact with an associated annular reinforcing element and at least partially envelops the associated annular reinforcing element and bead filler, . . . and wherein a ratio of a height of a transverse section of the tyre to a chord of the transverse section of the tyre is between 0.25 and 0.45,” as recited in amended independent claim 31 (emphases added), and a high or very high performance pneumatic tyre, comprising: “a chafer; . . . wherein the chafer is disposed axially internal with respect to the at least one carcass ply, and wherein a ratio of a height of a transverse section of the tyre to a chord of the

transverse section of the tyre is between 0.25 and 0.45,” as recited in amended independent claim 69 (emphases added).

As explained above, the elements of independent claims 31 and 69 are neither taught nor suggested by the cited references. Consequently, the Final Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the claim. Accordingly, no reason has been clearly articulated as to why the claim would have been obvious to one of ordinary skill in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established for independent claims 31 and 69. Claims 31 and 69 are patentable over *Io* in view of *Okamoto*. Applicants therefore request that the rejection of claims 31 and 69 under 35 U.S.C. § 103(a) be withdrawn.

## **II. NEW CLAIM**

New claim 72 depends from independent claim 31 and is allowable at least for the same reasons independent claim 31 is allowable. In addition, the dependent claim recites unique combinations that are neither taught nor suggested by the cited art, and therefore is also separately patentable.

## **III. CONCLUSION**

Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 31-49, 51, 54-65, and 68-72 in condition for allowance. Applicants submit that the proposed amendments of claims 31, 41, 69, and 70 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were

either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Furthermore, Applicants respectfully point out that the final action by the Examiner presented some new arguments as to the application of the art against Applicants' invention. It is respectfully submitted that the entering of the Amendment would allow the Applicants to reply to the final rejections and place the application in condition for allowance.

Finally, Applicants submit that the entry of the Amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

If there is any fee due in connection with the filing of this Amendment, please charge the fee to Deposit Account 06-0916.

Respectfully submitted,

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Dated: April 27, 2011

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